

Brigita Gylytė

CONTACT INFORMATION

Adresas Verkių Str. 98, Vilnius LT-12201, Lithuania
Tel. Nr.: +370 682 24048
El. paštas: brigita.gylyte@gamtc.lt
<https://www.researchgate.net/profile/Brigita-Gylyte-2>

EDUCATION AND ACADEMIC DEGREE

2010-2014 PhD studies; Biomedical sciences, Botany (04 B); Vilnius University with Nature Research Center; doctoral dissertation “Biological effects induced by the suspensions of copper oxide nanoparticles in the cells of *Nitellopsis obtusa* (Desv.)J.Groves”; scientific supervisor Dr Levonas Manusadžianas.
2004-2005 Teacher's qualification, Faculty of Natural Sciences, Vilnius University.
2001-2003 Master's degree in Biology; Faculty of Natural Sciences, Vilnius University.
1997–2001 Bachelor's degree in Biology; Faculty of Natural Sciences, Vilnius University.

PROFESSIONAL EXPERIENCE

2017 – Present Researcher; Nature Research Centre.
2012 – 2017 Junior researcher; Nature Research Centre.
2010 – 2011 Senior laboratory assistant; Nature Research Centre.
2003 – 2012 Biology teacher; Veliučionys Centre for Children Socialization.

RESEARCH INTERESTS

Aquatic ecotoxicology, environmental toxicology.

PUBLICATIONS

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (with citation index):

1. Manusadžianas L., Caillet C. Fachetti L., **Gylytė B.**, Grigutytė R., Jurkonienė S., Karitonas R., Sadauskas K., Thomas F., Vitkus R., Féraud J.-F. (2012). Toxicity of copper oxide nanoparticle suspensions to aquatic biota. *Environmental Toxicology and Chemistry*, 31(1):108-114. DOI 10.1016/j.envpol.2012.09.016
2. Krevš A., Darginavičienė J., **Gylytė B.**, Grigutytė R., Jurkonienė S., Karitonas R., Kučinskienė A., Pakalnis R., Sadauskas K., Vitkus R., Manusadžianas L. (2013). Ecotoxicological effects evoked in hydrophytes by leachates of invasive *Acer negundo* and autochthonous *Alnus glutinosa* fallen off leaves during their microbial decomposition. *Environmental Pollution*, 173:75–84

3. Manusadžianas L., Darginavičienė J., **Gylytė B.**, Jurkonienė S., Krevš A., Kučinskienė A., Mačkinaite R., Pakalnis R., Sadauskas K., Sendžikaitė J., Vitkus R. (2014). Ecotoxicity effects triggered in aquatic organisms by invasive *Acer negundo* and native *Alnus glutinosa* leaf leachates obtained in the process of aerobic decomposition. *Science of the Total Environment*, 496:35–44. DOI 10.1016/j.scitotenv.2014.07.005
4. Manusadžianas L., **Gylytė B.**, Grigutyte R., Karitonas R., Sadauskas K., Vitkus R., Šiliauskas L., Vaičiūnienė J. (2017). Accumulation of copper in the cell compartments of charophyte *Nitellopsis obtusa* after its exposure to copper oxide nanoparticle suspension. *Environmental Science and Pollution Research*, 24(36):27653-27661. DOI 10.1007/s11356-016-8023-0
5. Manusadžianas L., Vitkus R., **Gylytė B.**, Cimperman R., Džiugelis M., Karitonas R., Sadauskas K. (2020). Ecotoxicity responses of the macrophyte algae *Nitellopsis obtusa* and freshwater crustacean *Thamnocephalus platyurus* to 12 rare earth elements. *Sustainability*, 12(17):7130. DOI 10.3390/su12177130
6. **Gylytė B.**, Jurkonienė S., Cimperman R., Šveikauskas V., Manusadžianas L. (2021). Biomarker identification of isolated compartments of the cell wall, cytoplasm and vacuole from the internodal cell of characean *Nitellopsis obtusa*. *PeerJ* e10930, DOI 10.7717/peerj.10930
7. Khoma V., Martinyuk V., Matskiv T., Gnatyshyna L., Baranovsky V., Gladiuk M., **Gylytė B.**, Manusadžianas L., Stoliar O. (2022). Environmental concentrations of Roundup in combination with chlorpromazine or heating causes biochemical disturbances in the bivalve mollusc *Unio tumidus*. *Environmental Science and Pollution Research*. 29:14131–14142. DOI 10.1007/s11356-021-16775-1.
8. Martyniuk V., Khoma V., Matskiv T., Baranovsky V., Orlova-Hudim K., **Gylytė B.**, Symchak R., Matciuk O., Gnatyshyna L., Manusadžianas L., Stoliar O. (2022). Indication of the impact of environmental stress on the responses of the bivalve mollusk *Unio tumidus* to ibuprofen and microplastics based on biomarkers of reductive stress and apoptosis. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, 261: 109425. DOI 10.1016/j.cbpc.2022.109425.
9. Martyniuk V., **Gylytė B.**, Matskiv T., Khoma V., Tulaidan H., Gnatyshyna L., Orlova-Hudim K., Manusadžianas L., Stoliar O. (2022). Stress responses of bivalve mollusk *Unio tumidus* from two areas to ibuprofen, microplastic and their mixture. *Ecotoxicology* 31: 1369–1381. DOI 10.1007/s10646-022-02594-8.

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (without citation index):

1. **Gylytė B.**, Manusadžianas L., Sadauskas K., Vitkus R., Jurkonienė S., Karitonas R., Petrošius R., Skridlaitė G., Vaičiūnienė J. (2015). Latent cell mortality after short-term exposure of *Nitellopsis obtusa* cells to copper oxide nanoparticles. *Botanica Lithuanica*, 21(2):89–98. DOI 10.1515/botlit-2015-0012

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

2020-2021	Research Council of Lithuania, Lithuanian-Ukrainian Cooperation Program grant No S-LU-20-10, “Development of bioassay-biomarker battery for the evaluation of pharmaceutical-impacted aqueous environment”.
2012–2014	Research Council of Lithuania, grant No LEK-12/2012, "Ecotoxicological impact of the boxelder maple invasion on the waterside ecotones" (ACERTODUE). Ministry of Environment of Lithuania, grant No 4F11-54, "Development of

- 2011–2014 methodological and legal strategy for the control of effluent ecotoxicity".
Research Council of Lithuania, grant No LEK-20/2010, "Fallen-off leaves induced oxidative stress changes in hydrophytes due to invasion of *Acer negundo*" (ACERTOXX).
- 2010–2011

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. Manusadžianas L, **Gylytė B**, Jurkonienė S, Martinyuk V, Stoliar O. 2022. Lanthanide and pharmaceutical single and joint toxicity effects on charophyte alga, and *Ceriodaphnia dubia* over three generations. 20th International Symposium on Toxicity Assessment (ISTA-20), Saskatoon, SK Canada, August 15-18, 2022
2. **Gylytė B**, **Baronaitė G**, Manusadžianas L. 2022. Pharmaceutical and lanthanide mixture toxicity effects over three generations of *Ceriodaphnia dubia*. 9th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2017) & The International Society of Ecotoxicology and Environmental Safety (SECOTOX) Conference. Mykonos, Greece, June 3-9, 2022
3. Manusadžianas L, Džiugelis M, Garnytė G, **Gylytė B**, Grigutytė R, Jurkonienė S., Šveikauskas V. 2019. Responses of charophyte *Nitellopsis obtusa* to lanthanides. 19th International Symposium on Toxicity Assessment (ISTA-19), Thessaloniki, Greece, August 25-30, 2019.
4. Manusadžianas L., **Gylytė B.**, Karitonas R., Sadauskas K., Vitkus R., Vaičiūnienė J. Charophyte cell toxicity response to nCuO and CuSO₄: Does it depend on ambient calcium? 18th International Symposium on Toxicity Assessment (ISTA-18), Limeira, Brazil, July 16-21, 2017.
5. **Gylytė B**, Jurkonienė S, Sadauskas K., Vitkus R., Manusadžianas L. 2017. Cu accumulation in charophyte cell compartments after its exposure to nCuO and CuSO₄: Reevaluation following improved isolation procedure. Sixth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2017) & The International Society of Ecotoxicology and Environmental Safety (SECOTOX) Conference. Thessaloniki Greece, June 24-30, 2017
6. Manusadžianas L, Sadauskas K., Vitkus R, **Gylytė B**, Karitonas R, A. Krevš, A. Kučinskienė, N. Kazlauskienė and J. Žaltauskaitė. 2017. Two-level test-battery approach for routine effluent control in Lithuania. Sixth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2017) & The International Society of Ecotoxicology and Environmental Safety (SECOTOX) Conference. Thessaloniki Greece, June 24-30, 2017
7. **Gylytė B.**, Grigutytė R., Jurkonienė S., Sadauskas K., Vaičienė J., Vitkus R., Manusadžianas L., 2015: The dynamics of Cu accumulation in charophyte cell and its delayed response after short-term exposure to nCuO. 17th International Symposium on Toxicity Assessment (ISTA-17), Seattle, USA, August 1–4, 2015.
8. Jurkonienė S., Darginavičienė J., **Gylytė B.**, Karitonas R., Sadauskas K., Vitkus R., Manusadžianas L., 2014: *Nitellopsis obtusa* microsomal H⁺-ATPase activity as a biomarker for general water toxicity. 19th Meeting of the Group of European Charophytologists (GEC 19th) Vilnius, Lithuania, September 11–14, 2014.
9. Manusadžianas L., **Gylytė B.**, Jurkonienė S., Sadauskas K., Vitkus R., 2014: Remote effects in charophyte cell of *Nitellopsis obtusa* after short-term exposure to CuO nanosuspensions. SETAC Europe 24th Annual Meeting in Basel, Switzerland, May 9–15, 2014.

10. **Gylytė B.**, 2013: Short-term exposure effect of CuO nanoparticle suspension on charophyte cell. 3th Young Environmental Scientists (YES) meeting. Krakow, Poland, February 11–13, 2013.
11. Jurkonienė S, Darginavičienė J, **Gylytė B**, Krevš A, Vitkus R., Manusadžianas L. 2011: Impact of CuO nanosuspensions and fallen-leaf leachates on *Nitellopsis obtusa* ATPase functional activity. 15th International Symposium on Toxicity Assessment(ISTA-15). City University of Hong Kong. Hong Kong, China, July 03-08,2011.
12. Manusadžianas L, Darginavičienė J, **Gylytė B**, Grigutytė R, Jurkonienė S, Karitonas R, Krevš A, Kučinskienė A, Pakalnis R, Sadauskas K, Vitkus R. 2011: Comparative study of the impacts of invasive *Acer negundo* and autochtonus *Alnus glutinosa* leaf extracts on aquatic organisms. 15th International Symposium on Toxicity Assessment(ISTA-15). City University of Hong Kong. Hong Kong, China, July 03-08,2011.
13. Manusadžianas L, Darginavičienė J, **Gylytė B**, Grigutytė R, Jurkonienė S, Krevš A, Kučinskienė A, Pakalnis R, Sadauskas K, Vitkus R. 2011: Ecotoxicological effects evoked in aquatic organisms by leachates of invasive *Acer negundo* and autochtonus *Alnus glutinosa* fallen-off leaves during their microbiological decomposition. 3rd International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2011) & SECOTOX Conference. Skiathos, Greece, June 19-24,2011.

National scientific conferences:

1. **Gylytė B.**, 2013: Trumpalaikio nCuO poveikio toksiškumas žvaigždėtojo maurašakio *Nitellopsis obtusa* (Desv.) J. Groves ląstelei. LMA jaunųjų mokslininkų konferencija BIOATEITIS: gamtos ir gyvybės mokslų perspektyvos. Vilnius, Lithuania, December 11, 2013.
2. **Gylytė B.**, 2013: Toxic effects of ionic and nanopartical forms of copper on *Nitellopsis* cells. NanoTechnas. Novel nanomaterials and their application in bioanalysis. Vilnius, Lithuania, May 8–10, 2013

PARTICIPATION IN THE STUDY PROCESS

Supervision of bachelor and master students:

Gabrielė Baronaitė	Bachelor thesis „ <i>Ceriodaphnia dubia</i> Survival and Population Parameters Affected by Pharmaceutical Compounds and Lanthanides Over Three Generation“. Vilnius University, Life Sciences Center, Microbiology and biotechnology study program.	2020 – 2022
Ugnė Peldžiūtė	Bachelor thesis „Lanthanoids and their mixtures with pharmaceutical substances effect on <i>Nitellopsis obtusa</i> cell“. Vilnius University, Life Sciences Center, Microbiology and biotechnology study program.	2020 – 2022